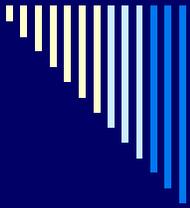


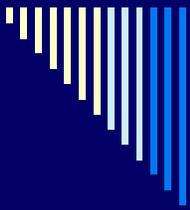
Collaborative Aggregation Partnership (CAP) and Network Nebraska

Make it happen



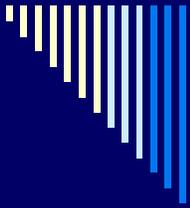
NITC Technical Panel

- Five member panel charged serving the NITC and assist in the development of a statewide technical infrastructure that will be scalable, reliable, and efficient.
 - Created and included in statute in 1998 as an advisory body to the NITC.
-



Technical Panel Members

- Walter Weir, University of Nebraska
CIO, Chair
 - Brenda Decker, State of Nebraska
CIO,
 - Christy Horn, Assistive Technology
 - Kirk Langer, K-12 representative
 - Michael Winkle, Nebraska
Educational Telecommunications
 - Alternates to each of the above
-



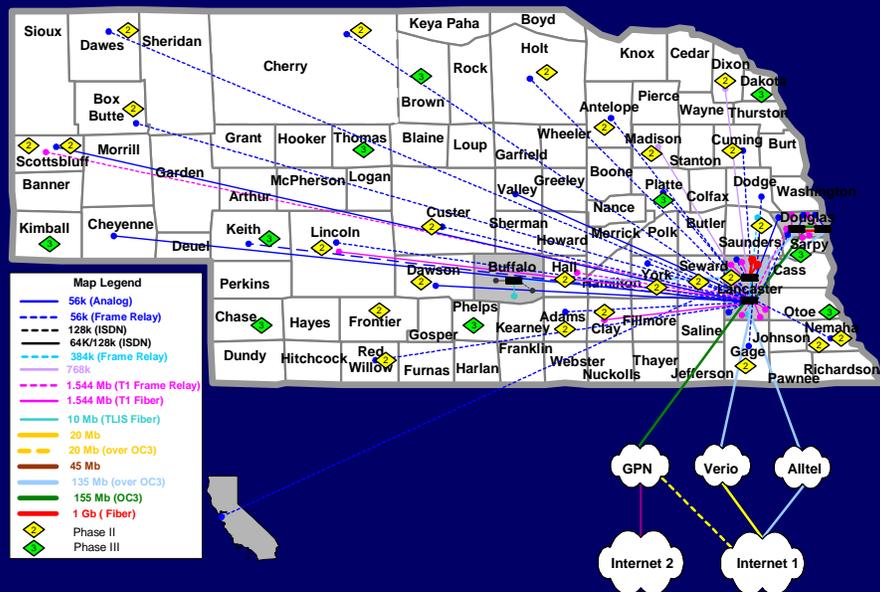
Early Days of Network

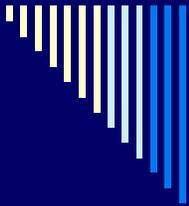
- Lt. Governor Heineman
 - University President Dennis Smith

 - Create partnership to aggregate network services.
 - Cost savings
 - Make IT Happen
-

University Network - 2000

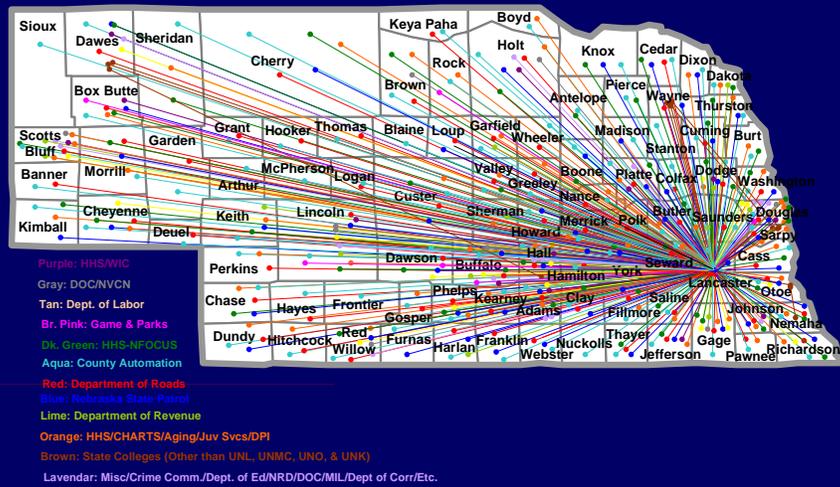
University of Nebraska State Wide Network

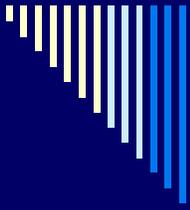




State Network - 2000

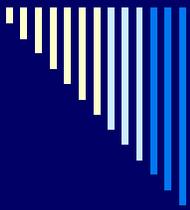
State of Nebraska Widen Project State Networks





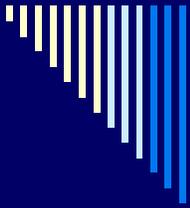
TINA – Widen - Netcom

- Several early attempts to get a network started.
- Including surveys, RFPs, etc.
- Learned our lessons
- Pilot connection to Scottsbluff
 - NU and State
 - Split a DS3 – 45 mbps
 - Saved considerable \$\$s
 - More importantly, we made it work



New Network Strategy - 2002

- Divide state and implement in phases
 - State and University as anchor
 - Phase 1 RFP – Lincoln, Omaha, Kearney
 - Phase 2 RFP – Northeast and Western Nebraska
 - Two logical networks, shared contracts
 - Qwest and Alltel (now Windstream)
 - Redundancy from DFS
-

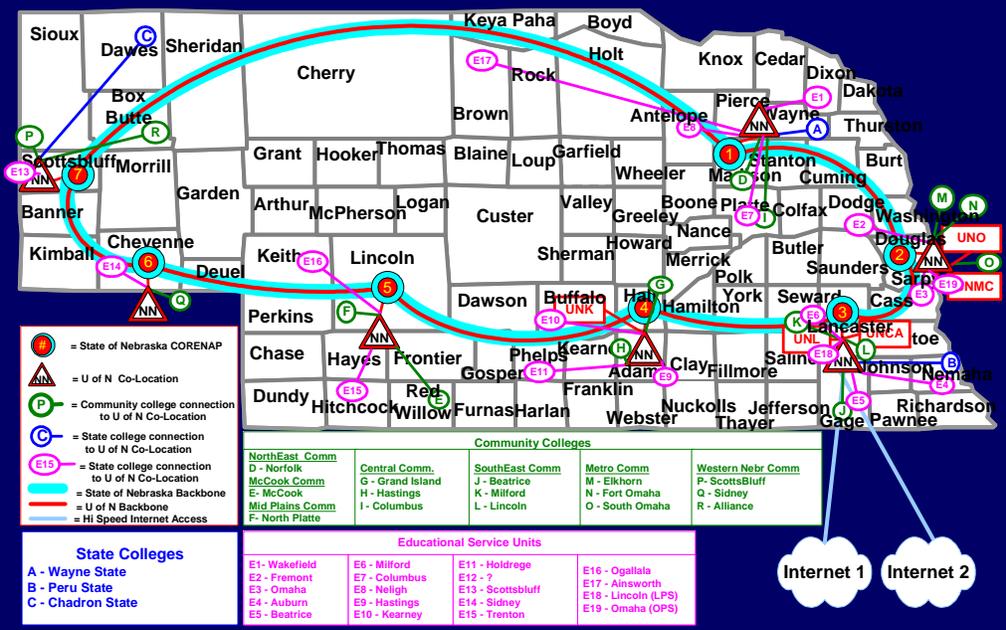


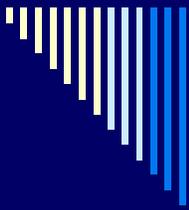
Network Nebraska - 2003

- USAC – Provider (via State)
 - Responded to school erate applications
 - Not a lot of belief that the State and University could provide the service
 - November – Project 42 becomes first customer/partner.
 - ISP had financial problems
 - Alan Wibbels was willing to take a chance on NN
-

University of Nebraska & NETCOM Network

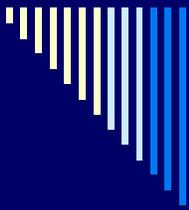
with U of N campuses, State College, Community College & ESU connections





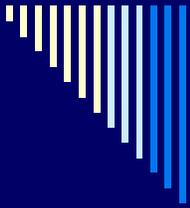
Collaborative Aggregation Partnership - CAP

- Mission – “Make it happen”
- Network Nebraska Needed a governing body to help set direction
- Primary Members
 - NU CIO
 - State CIO
 - NET
- Since have added:
 - PSC
 - K-12
 - NDE
 - Unicameral
 - NITC



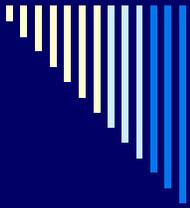
CAP Initiatives

- Aggregate Internet bandwidth
 - Pricing was all over - \$250 to \$1,400 per megabit (and going up) – total purchased statewide ~ 150 megabits
 - Current pricing - \$19 - \$50 per megabit – over 600 megabits in use now + Internet 2
- Web Site for distribution of information
 - www.networknebraska.net
- Information Desk
 - At NET 1-888-NET-NEBR
 - info@networknebraska.net



CAP Initiatives

- Build Educational Network – K-20
 - Develop Partnerships
 - Define services – primary ISP role
 - Provide connectivity/backbone
 - Manage network
- Internet 2
 - Sponsored Education Group Participant
 - Now include peering
 - Google, Yahoo, etc



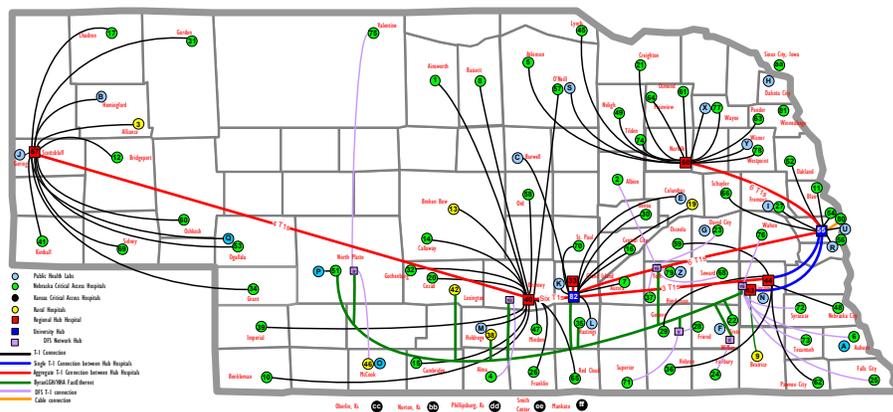
CAP Initiatives

□ Telehealth Network

- 80+ Hospitals
 - 20+ Public Health Departments
 - Private network – UNMC is the common connection point to Education Network
 - Qwest, Action Communications
Windstream and Dark Fiber Solutions
 - Network management
-

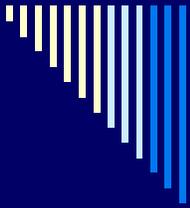


Nebraska Telehealth Network



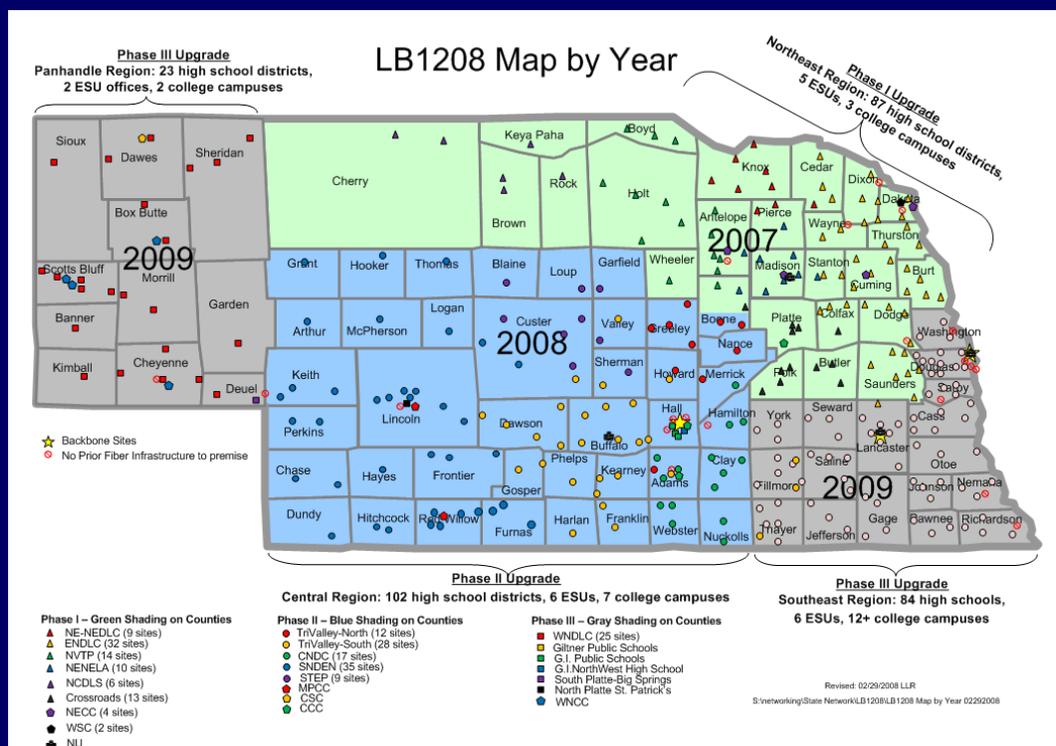
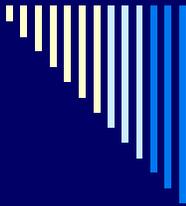
| Nebraska Hospitals | | | Nebraska Public Health Depts. | | |
|--------------------|----------------------|-------------------|-------------------------------|----------------------|-------------------|
| 1. Alameda | 20. Brown County | 30. Genoa | 57. O'Neill | Alvera St. Anthony's | A. Auburn |
| 2. Alliance | 21. Boone County | 31. Gordon | 58. Ord | Valley County | B. Aurora |
| 3. Alliance | 22. Butler County | 32. Gosport | 59. Osceola | Garden County | C. Burwell |
| 4. Alma | 23. Cass County | 33. Grand Island | 60. Oskosh | Grant County | D. Columbus |
| 5. Alliance | 24. Chilton County | 34. Grant | 61. Osmond | Franklin County | E. Council Bluffs |
| 6. Auburn | 25. Clay County | 35. Hastings | 62. Pawnee City | Franklin County | F. Fremont |
| 7. Aurora | 26. DeWitt County | 36. Healy | 63. Permi | Franklin County | G. Grand Island |
| 8. Bassett | 27. Dixon County | 37. Henderson | 64. Plainville | Franklin County | H. Hastings |
| 9. Beatrice | 28. Fillmore County | 38. Holdrege | 65. Red Cloud | Franklin County | I. Kearney |
| 10. Beatrice | 29. Franklin County | 39. Imperial | 66. Schuyler | Franklin County | J. Lincoln |
| 11. Blair | 30. Gage County | 40. Kearney | 67. Scribner | Franklin County | K. McCook |
| 12. Broken Bow | 31. Hamilton County | 41. Kimball | 68. Seward | Franklin County | L. Nelora |
| 13. Cambridge | 32. Holt County | 42. Lexington | 69. St. Paul | Franklin County | M. North Platte |
| 14. Cambridge | 33. Johnson County | 43. Lincoln | 70. St. Paul | Franklin County | O. Ogallala |
| 15. Central City | 34. Kearney County | 44. Lincoln | 71. Superior | Franklin County | P. Omaha |
| 16. Central City | 35. Keith County | 45. Lincoln | 72. Syracuse | Franklin County | Q. Ord |
| 17. Chadron | 36. Kimball County | 46. McCook | 73. Tecumseh | Franklin County | R. Papillion |
| 18. Columbus | 37. Lancaster County | 47. Minden | 74. York | Franklin County | S. Plattsmouth |
| 19. Cozad | 38. Lincoln County | 48. Nebraska City | 75. Valentine | Franklin County | T. Plattsmouth |
| 20. Cozad | 39. Logan County | 49. Nelora | 76. Wayne | Franklin County | U. Plattsmouth |
| 21. Creighton | 40. Madison County | 50. Norfolk | 77. Wayne | Franklin County | V. Plattsmouth |
| 22. Crete | 41. McPherson County | 51. North Platte | 78. West Point | Franklin County | W. Plattsmouth |
| 23. David City | 42. Nemaha County | 52. North Platte | 79. York | Franklin County | X. Plattsmouth |
| 24. Fairbury | 43. Nemaha County | 53. Ogallala | 80. York | Franklin County | Y. Plattsmouth |
| 25. Fairbury | 44. Nemaha County | 54. Ogallala | 81. York | Franklin County | Z. Plattsmouth |
| 26. Fairbury | 45. Nemaha County | 55. Omaha | 82. York | Franklin County | |
| 27. Fremont | 46. Nemaha County | 56. Omaha | | Franklin County | |
| 28. Fremont | 47. Nemaha County | 57. Omaha | | Franklin County | |
| 29. Fremont | 48. Nemaha County | 58. Omaha | | Franklin County | |
| 30. Fremont | 49. Nemaha County | 59. Omaha | | Franklin County | |

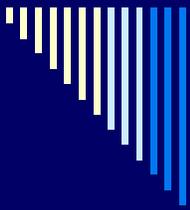
| Nebraska Hospitals | Dark Fiber Solutions Network Hubs |
|----------------------|---|
| aa. Scott City, Iowa | i. Lincoln Bryan LGH, 1600 S. 48th |
| bb. Norton, KS | ii. Wilber Head End, 901 N. Main, Wilber |
| cc. Oberlin, KS | iii. DFS York, 600 1/2 Grand Ave., York |
| dd. Phillipsburg, KS | iv. WF O'Neill, 601 W. Laclea St., North Platte |
| ee. Manhattan, KS | v. Kearney Head End, 300 C. St., Kearney |



CAP Initiatives

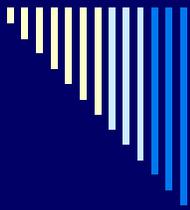
- LB1208 – Distance Learning
 - Design and implement new network
 - IP Centric
 - Include all areas of State
 - Phased implementation
 - High bandwidth
 - Inter-regional Transport - backbone
 - Replace obsolete distance learning equipment
 - Network Operations Center
-





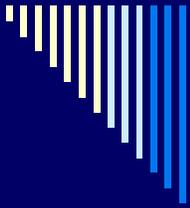
CAP – Network Nebraska Futures

- Further develop service level agreements
- Improve Network Operations Center
 - Network management products
 - Partner access
- Implement “trouble ticket” system
- Define other services
 - Disaster recovery
 - Server Hosting
 - Email
 - Content streaming
 - Security



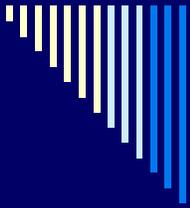
CAP – Network Nebraska Futures

- Formalize CAP membership
 - Formalize Network Operations
 - Formalize Advisory Groups
 - Advanced Network initiatives
 - Continue QOS implementation
 - IPV6
 - Converged Networking
 - Even more security
 - Network traffic engineering
 - Create redundancy in network
-



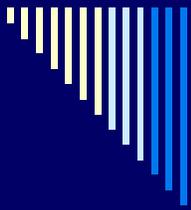
Additional Partnerships

- State and University Disaster Recovery
 - Fiber ring between Omaha and Lincoln
 - Potential other fiber needs
 - State Colleges and University
 - ERP System
 - SIS System
 - National network partnerships
-



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-



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